

REMARKS

The Office Action has been carefully considered. Applicant respectfully submits that the above-referenced claim amendments and the following remarks draw attention to aspects of the asserted prior art references that distinguish and establish the patentability of the present invention thereover.

By the present Amendment, claims 1, 4, 6, 8-9, 11-16 have been amended and claim 10 has been withdrawn due to a restriction requirement and the subsequent election of species. It is believed that the amendments to the claims, the specification and the drawings are supported by the original disclosure and, as such, do not introduce new matter into the application.

Rejections under 103(a):

The Examiner has rejected claims 1, 4-6, 8-9, and 11-16 under 35 U.S.C. 103(a) as being unpatentable over Goto et al. (U.S. Pat. No. 5,505,898) in view of Thompson et al. (U.S. Pat. No. 4,895,205) and either King et al. (U.S. Pat. No. 4,205,407) or Chapman (U.S. Pat. No. 5,136,969). These rejections are traversed and reconsideration is respectfully requested.

In order to establish a prima facie case of obviousness, the Examiner has the burden of proving, by reasoning or evidence, that: 1) there is some suggestion or motivation, either in the reference itself or in the knowledge available in the art, to modify that reference's teachings; 2) there is a reasonable expectation on the part of the skilled practitioner that the modification or combination has a reasonable expectation of success; and 3) the prior art reference must teach or suggest all of the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Both the teaching or suggestion and the reasonable expectation of success must be found in the prior art and not based on an applicant's disclosure. *Id.*

In carrying this burden, the Examiner "must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious." *Ex parte Clapp*, 227 USPQ 972, 973 (PTOBPAI 1985). A rejection based on §103 clearly must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art. *In re Warner*, 154 USPQ 173, 178 (CCPA 1967). The Examiner may not, because he may doubt that the invention is patentable, resort to speculation, unfounded assumptions, or hindsight reconstruction to supply deficiencies in his required factual basis. *Id.*

The instant independent claim 1 is directed to a pipe fusion machine for fusing sections of pipe to form a pipeline, comprising: (a) a fusing mechanism; and (b) a cleaning mechanism for cleaning debris from the external surface of the sections of pipe prior to fusion of the same. The cleaning mechanism comprises: a first **discus** plate having, with respect to said cleaning mechanism, an interior surface; a second **discus** plate having, with respect to said cleaning mechanism, an interior surface; a flexible **discus** wiper having planar surfaces, **wherein the interior surfaces of said first and second discus plates and the planar surfaces of said flexible discus wiper are in a parallel configuration.** The cleaning mechanism further comprises a plurality of independent spacers removably affixed to the interior surface of said first discus plate and the interior surface of said second discus plate, said spacers connecting and separating said discus plates, and being sized and positioned to allow said flexible discus wiper to be held between said interior surfaces of said discus plates.

Independent claim 6 is directed to a pipe cleaner, as described in claim 1 as the cleaning mechanism, distinct and apart from a fusing mechanism or any similar device. Independent claim 11 is direct to an improved method for fusing sections of pipe, whereby the improvement comprises cleaning the sections of pipe prior to the fusion of the same by means of a cleaning mechanism, as described in claim 1.

As mentioned above, the Examiner has rejected claims 1, 4-6, 8-9, and 11-16 as obvious over Goto in view of Thompson and either King or Chapman. Specifically, the Examiner asserts that Goto teaches the use of a scraper to clean the outer surface of a pipe prior to fusion welding the pipe to another pipe. The Examiner, however, acknowledges that Goto fails to describe the scraper used in the fusing apparatus. Therefore, the Examiner relies on Thompson and either King or Chapman to support the obviousness rejection over Goto.

The Examiner suggests that Thompson shows a scraper for the outside surface of a pipe comprising two plates 18, 20 that are movable from a closed position to an open position, wherein a planar flexible wiper 32 can be inserted or removed. This flexible wiper is said to have an annular opening 34 with a diameter 36 slightly smaller than the outside diameter of the pipe to be cleaned. The Examiner further asserts that annular ledges 38 of the plates hold the wiper in place. Therefore, the Examiner concludes, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the scraper of Thompson as the scraper in the fusing apparatus of Goto.

However, these semi-circular sections 18, 20 do not constitute “discus” plates as described and claimed in the present application (wherein the term discus is defined and shown as resembling a flat, circular plate). Furthermore, the surfaces of these semi-circular sections are in perpendicular, not parallel, configuration with the planar surfaces of the flexible wiper 32, as required by the instant independent claims of the present application. Therefore, Thompson fails to teach a pipe cleaner that comprises first and second discus plates, or the parallel configuration of said plates with a wiper.

The Examiner further suggests that King and Chapman each show pipe cleaning devices having a pair of annular plates 26, 28 (King), 14, 80 (Chapman) that are separated by independent, removable spacers 44 (King), 22 (Chapman) such that the respective cleaning implements are disposed between the respective annular plates. King, as asserted by the Examiner, teaches this arrangement to allow for quick changes of the annular plates and cleaning devices when cleaning pipes of different diameters. Similarly, the Examiner asserts that Chapman teaches this arrangement so that the cleaning device may be constructed around a pipe when an end of the pipe is not accessible.

Neither King nor Chapman resolve the deficiencies of Thompson nor do they, apart or in any combination teach or suggest, the cleaning mechanism integral to the instant independent claims. Specifically, neither King nor Chapman disclose the use of a discus wiper having planar surfaces, said surfaces being in parallel configuration with the interior surface of the respective annular plates. While King discloses the possibility of using “scraper blades...or other cleaning elements” (Col. 3, Lines 35-37) it is clear that they would be attached to the fingers 52 (as is the case with the preferred cleaning element, the brushes) with the surfaces thereof positioned perpendicular to the surfaces of the disks (this orientation is necessitated by the rotation of the disks as contemplated in King). Similarly, Chapman contemplates a reconditioning device (described as scraper, a sand blasting nozzle, tape applicator paint roller, water nozzle, etc.) mounted on a retaining arm which could not secure a discus wiper or scraper in any meaningful way.

Furthermore, the examiner appears to recognize that Thompson fails to disclose a cleaning mechanism, or a pipe cleaner, comprising a plurality of independent spacers, and therefore turns to King and Chapman for prior art disclosure of this element. However, integrating the “spacers” taught in King and Chapman between the semi-circular plates 18 and 20 would inhibit the closing thereof - a critical function for the device taught in Thompson.

The present independent claims, as amended, define the spacer element as (a) being affixed to the interior surfaces of the discus plates; (b) connecting and separating the discus plates; and (c) being sized and positioned to allow the wiper **to be held** between the interior surfaces of the discus plates. While the spacers in King and Chapman function in part to separate and support the discus plates, neither is sized and positioned to allow a wiper to be held between the interior surfaces of the discus plates. In King, the “cross members” 44 that extend between the rings are used to support the brush head assembly (shown in the figures as a series of three independent brush heads per cross arm). This is simply too wide to support a discus wiper (which is not contemplated in any event in King). In Chapman, the “travel module” 22 (a pair of modules, in the preferred embodiment described in the detailed description) support the frame or plates, as well as a housing 24, and the critical wheels. This, too, is simply too wide to support a discus wiper. Therefore, neither the “cross members” of King nor the “travel module” of Chapman teach the use of spacers being sized and positioned to allow the wiper to be held between the interior surfaces of two discus plates.

As there is no motivation to combine the teachings of Thompson with the teachings of King or Chapman (except using improper hindsight in light of the present application), as the combination destroys the teachings of all of these patents, and as the elements of a discus wiper in parallel configuration with the interior surfaces of two discus plates, and spacers sized and positioned to allow the wiper to be held between the interior surfaces of the discus plates, are not taught by any of the patents, the amendments to the claims traverse the rejections of the examiner and the combination of the teachings of Goto and Thompson with King or Chapman. It is therefore submitted that the rejection under 35 U.S.C. §103 has been overcome. Reconsideration is respectfully requested.

Rejections under 112:

The Examiner has rejected claims 1,4-6,8-9, and 11-16 under 35 U.S.C. 112, first paragraph, as being unpatentable for failing to comply with the written description requirement. This rejection is traversed and reconsideration is respectfully requested. Disclosure of the term “discus” in reference to the first and second plates and the flexible wiper is provided in FIG. 1, as originally submitted, and in the herein amended paragraphs 21 and 22 of the specification. The United States Court of Customs and Patent Appeals has noted that “it is proper in support of claims which otherwise could not be allowed, to amend the specification of a pending application to include new

matter clearly and conclusively disclosed by the drawings.” *In re Olson*, 212 F.2d 590, 592 (C.C.P.A. 1954). The same Court later further elaborated that this rule set forth in *Olson* “is the familiar rule that the drawings and the specification may be amended to conform to each other and that the added matter will not be deemed technical ‘new matter’ within the prohibition of the law.” *In re Heinle*, 342 F.2d 1001, 1007 (C.C.P.A. 1965). Therefore, Applicant asserts that the amendments to the specification do not improperly add new matter to the specification as prohibited by 37 C.F.R. 1.32; and that FIG. 1 and the specification as hereby amended sufficiently fulfill the written description requirement and provide support for the embodiments of the device of the present invention.

Applicant respectfully submits that the present application is in condition for allowance. The Examiner is encouraged to contact the undersigned to resolve efficiently any formal matters or to discuss any aspects of the application or of this response. Otherwise, early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,

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